



# IS DESIGN RESEARCH SIMPLY RHETORIC?

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## ABSTRACT

The paper briefly considers the beginnings of the Design Methods movement. It outlines the rediscovery of the art of Rhetoric as developed in Ancient Greece and the more recent uses of it. The paper relates how, with the rise of the hard sciences, Rhetoric lost out to the scientific method as a tool of reasoning. Common-sense reasoning and knowledge are shown to use rhetorical reasoning. The three dimensions of Rhetoric, *ethos*, *logos* and *pathos* are reinterpreted in relation to design. There follow some observations on the unconscious use of rhetoric in an architectural article from a “quality” British newspaper. In conclusion the paper observes that the attempts of the early Design Methods movement were doomed because they were preoccupied with the

deductive logic of formal methods. The paper goes on to suggest that as Rhetoric is increasingly seen as a comprehensive tool for evaluation it can give us a means of dealing with consumer values and requirements.

## KEYWORDS

Rhetoric, Architecture, Design Research

## 1 INTRODUCTION

This paper seeks to elucidate the design process by considering it in terms of ancient Rhetoric. The word is used here strictly in its Aristotelian meaning of “the detection of the persuasive aspects of each matter.”<sup>1</sup> This practical art, first elaborated in Greek antiquity, provided the speaker with a toolkit which could be used as a means of persuading an audience to agree with a particular point of view or course of action. Until a few hundred years ago, training in the techniques of Rhetoric was considered to be an essential part of a person's education. Although nowadays the word ‘rhetoric’ is often used to mean misleading use of language or deceitful argument,<sup>2</sup> nevertheless, the teaching of an attenuated form of Rhetoric has persisted in the areas of English composition and Law. In the last half-century interest in the application of Rhetoric has diffused out to other areas such as Software and now to Design. It has become clear that this ‘New Rhetoric’ can facilitate areas of human activity which entail a synthesis of ideas and competing values and requirements, in order to arrive at a best outcome.

## 2 MODERN DESIGN THEORY AND METHODS

It is generally held that the first steps in modern design theory and interest in systematic design methods emerged after the Second World War. It appears that these originated in a desire to extend the burst of creative activity associated with the war effort, where necessity was literally

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<sup>1</sup> “It is, then, established that rhetoric is not concerned with any single delimited kind of subject but is like dialectic and that it is a useful art. It is also clear that its function is not persuasion. It is rather the detection of the persuasive aspects of each matter and this is in line with all other skills.” (Aristotle, *Rhetoric*, transl. Lawson-Tancred, 1991).

<sup>2</sup> See for example Toulmin (2001).

‘the mother of invention’ because combatants were forced to use whatever resources they had to maximum advantage. This phenomenon is observable in Japan, in the Soviet Union, in the United Kingdom and also in the United States of America.

One well-documented case is Value Engineering, more usually called Value Analysis outside the USA. This originated during the war in the General Electric Company in the USA (Miles, 1961). Similarly, the basic ideas of TRIZ<sup>3</sup> were laid down, starting in 1946, in war-ravaged Baku by Genrikh Altshuller and later refined in the intellectual hothouse of a Soviet *gulag*.

The 1960s saw a surge of activity. In 1962 the first conference on design methods was held in London. This highlighted methodological similarities across many different fields of design. The Design Research Society<sup>4</sup> was founded in 1966, as a direct result of that conference. From the very beginning the Design Research Society drew members from all over the world. Closely associated with it was the Design Methods Group in the USA.

A worldwide design methods movement was spawned that generated a considerable literature that was however ultimately disappointing, because of a perception that the new methods did not live up to their promise, or because it seemed that they led to apparent sterility. See for example the publications of Christopher Alexander (1964)<sup>5</sup>. Similarly, sterility had befallen the ‘Modern Movement’ in Architecture a generation earlier, according to Leslie Martin<sup>6</sup> in his expository essay on his own approach to design published in 1967. The Design Methods Group held an international conference the following year (Bayazit, 2004). Herbert Simon (1969) was developing

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<sup>3</sup> This is a Russian acronym, Теория Решения Изобретательских Задач, whose accepted translation is, ‘The Theory of Inventive Design.’ This comprehensive and philosophical innovation procedure became widely known in the West only after the disintegration of the Soviet Union. For an account see the website (consulted on the 27th of August, 2007): <http://www.trizgroup.com/altshuller-bio.html>

<sup>4</sup> A brief account is given on the Society’s website under ‘History’ (consulted on the 27th of August, 2007): [http://www.designresearchsociety.org/joomla/index.php?option=com\\_content&task=view&id=14&Itemid=28](http://www.designresearchsociety.org/joomla/index.php?option=com_content&task=view&id=14&Itemid=28)

<sup>5</sup> Alexander’s later “Pattern Language” books have acquired an uncritical, cult-like following. The original idea, described in Alexander and Poyner (1970), assumed that buildings could be assembled from independent atomic patterns. However, his ideas have found applications in Computer Science where it is more likely that the variables would be in fact be independent of each other because they do not interact geometrically.

<sup>6</sup> “... just as the products of practical reason were being demonstrated on an impressive scale in the housing projects of Holland and Germany ... the developing theory became dogma. ... The speculative thought that could have extended the range of built forms into totally new environments dried up. We were left in Germany and elsewhere with a set housing solution solidified into parallel rows of slab blocks. The fact that this happened was of enormous consequence. The rational approach was at once suspect. The end result of practical reason appeared to be sterility ...”

his ideas on the “Sciences of the Artificial” and Lionel March (1976) had been working with Leslie Martin in the area from the middle of the nineteen-sixties. We skate over the history of this fascinating and complex period here, but it is well documented elsewhere, most recently perhaps by Nigan Bayazit (*ibid.*), who supplies numerous references to primary sources.

### 3 THE NEW RHETORIC

In his ‘Teacher’s Introduction to Composition in the Rhetorical Tradition,’ which is about teaching English writing, Winterowd (1994) says,

“In many ways, 1963 marked the beginning of the New Rhetoric. In that year, one could say that composition/rhetoric was a field with its own body of scholarship and, of course, with a history going back to the Greeks and Romans. ...”

He goes on to state that, “In 1958 the (USA) National Defence Education Act provided massive sums for improving the scientific education of the nation’s young people.” He adds that, following representations, the teaching of English received extra funding, from 1961, also in the national interest.<sup>7</sup>

Evidently unknown to the above, research had been taking place on the other side of the Atlantic concerning the relation between logic and value in the context of legal decision-making. In the course of their lengthy research, around the middle of the twentieth century, Perelman and Olbrechts -Tyteca (1958) rediscovered classical rhetorical reasoning and argumentation.

“In 1945, when I published my first study of justice, I was completely ignorant of the importance of rhetoric. ... Indeed, as I entirely accepted the principle that one cannot draw an ‘ought’ from an ‘is’ – a judgment of value from a judgment of fact – I was led inevitably to the conclusion that if justice consists in the systematic implementation of certain value judgments, it does not rest on any rational foundation: ‘As for the value that is the foundation of the normative system, we cannot subject it to any rational criterion: it is utterly arbitrary and logically indeterminate ... The idea of value is, in effect, incompatible with both formal

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<sup>7</sup> Nowhere in the book is there any mention of *Sputnik*, the Soviet space satellite, which had given rise to this sudden United States Government interest in creativity and education.

necessity and with experiential universality. There is no value which is not logically arbitrary.<sup>8</sup>

I was deeply dissatisfied with this conclusion ... since the philosophical enquiry ... could not provide an ideal of practical reason, that is, the establishment of rules and models for reasonable action. ... In other words, is there a logic of value judgments that makes it possible for us to reason about values instead of making them depend solely on irrational choices, based on interest, passion, prejudice and myth?

...

I could see but one way to solve the dilemma ... Could we not undertake ... an extensive enquiry into the manner in which the most diverse authors in all fields do in fact reason about values? By analysing political discourse, the reasons given by judges, the reasoning of moralists, the daily discussions carried on in deliberating about making a choice or reaching a decision or nominating a person, we might be able to trace the actual logic of value judgments which seem continually to elude the grasp of specialists in the theory of knowledge.

For almost ten years Mme L. Olbrechts -Tyteca and I conducted such an inquiry and analysis. We obtained results that neither of us had ever expected. Without either knowing or wishing it, we had rediscovered a part of Aristotelian logic that had been long forgotten or, at any rate, ignored and despised. It was the part dealing with dialectical reasoning, as distinguished from demonstrative reasoning – called by Aristotle analytics – which is analysed at length in the *Rhetoric*, *Topics*, and *On Sophistical Refutations*. We called this new, or revived, branch of study, devoted to the analysis of informal reasoning, *The New Rhetoric*.<sup>9</sup>” (Perelman, 1979, p8/9).

Toulmin (2001) explains the circumstances in which Rhetoric had fallen out of favour. From the sixteenth century onwards Europe was plunged into lengthy religious wars. At the same time, long-held cosmological ideas began to be questioned.

“ ... the belief that the ideas of rationality and method were tightly connected helped define the nature of that link from the start, and the standards imposed on

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<sup>8</sup> Perelman (1963)

<sup>9</sup> Perelman and Olbrechts -Tyteca (1958)

scientific and philosophical arguments by the demand for a rational method were taken to be universal, not varying from place to place, from time to time, or from one subject matter to another. Again, the soundness of this method was taken to be self-evident and self-validating. ... In brief, a fully rational method would comprise universal self-evident rules from which we deviated only at the risk of irrationality.”

...

“... the preferred rational method for scientific enquiry from the time of Galileo on was that of mathematical physics in general, and planetary mechanisms in particular. The methods attributed to physics were assumed to embrace – though in some cases indirectly – all other scientific and philosophical enquiries. From Galileo on, this idea rested on a theological basis, and involved questions of Faith.”

The persuasive, predictive power of the new sciences, the hunger for certainty, and the fervour of religious polarisation were such that there was no place for ambiguity or competing value systems: Rhetoric was shunned as a tool of reason by “right-thinking” people for over three hundred years.

## 4 COMMON-SENSE REASONING AND KNOWLEDGE

The emphasis on formal methods with their promise of certainty was a legacy of Scientific Modernism that had held sway since the seventeenth century, but these had begun to lose their potency by the start of the twentieth. In retrospect it is clear that the early Design Methods movement, with the enthusiasm of many of its adherents for scientific methods, took place against an opposing groundswell of interest in human values and the use of Reason to guide decision-making. This was accompanied by a reduction in the amount of trust people were prepared to place in professionals of all sorts – including designers – and by a desire for a more participatory approach to design. This interpretation goes some way towards accounting for the many differences of opinion and failures of communication that were observed at the time.

Loneragan (1957) has described at length the important place of common sense in reasoning and knowledge. He provides us with a philosophical explanation of how such reasoning operates. He says that common sense is a property of a community, acquired over long periods of time, and subject to gradual change as times and circumstances change. Some individuals are blessed with a greater measure of it than others. It is applied to particular situations where a practical decision

is needed about what to do. The results of actions provide self-correcting feedback which increases the store of common sense, and,

“... besides the hard way of finding things out for oneself, there is the comparatively easy way of learning from others. ... But what is done explicitly and deliberately by professional teachers, also is done implicitly and unconsciously by parents with their children and by equals among themselves. Talking is a basic human art; by it each reveals what he knows and provokes from others the further questions that direct his attention to what he had overlooked. More general and more impressive than talking is doing: deeds excite our admiration and stir us to emulation; we watch to see how things are done; we experiment to see if we can do them ourselves; we watch again to discover the oversights that led to our failures. Thus it is that what anyone discovers passes into the possession of many, to be checked against their experience and to be confronted with the test of their further questions. Thus too it is that the discoveries of different individuals enter into single, cumulative series; that the later presuppose and improve upon the earlier; and that the starting-point of each generation is where its predecessor left off.” (p289-290)

Lonergan reassures us that we do not have to be philosophers to make good and correct decisions; that there is certain communal knowledge shared among ordinary people; that they can reason and make judgements about practical affairs; that they can have a high probability of being right in their particular deliberations. The fact that reasoning is not deductive does not mean that it cannot be rational or logical. But, he says, because of the certainty that comes from deductive methods, and the standing of science in the modern world, many people have been under the illusion that the only certain knowledge is scientific knowledge, and that all other knowledge is inferior to it. His analysis makes it plain that commonsense knowledge is not only of equal value, but actually a necessary part of scientific progress. This might come as a surprise to some scientists.

“To regard them as rivals or competitors is a mistake, for essentially they are partners and it is their successful co-operation that constitutes applied science and technology, that adds invention to scientific discoveries, that supplements inventions with organisations, know-how, and specialized skills.” (p298)

## 5 RHETORIC IN DESIGN AND COMMUNICATION

Besides the evident communication media, there can be a variety of other ways in which communication or feedback can take place between the designer, user and third parties: for example through the medium of the designed object, the market and the circumstances of its production or procurement. The process of evaluation uses a rhetorical form of reasoning.

“Rhetoric, according to Aristotle, is the counterpart of dialectic, and the rhetorical enthymeme is the counterpart of the dialectical syllogism. Both these arts, rhetoric and dialectic, deal with opinion, and probability, not certainty, and therefore these two arts, and they alone, are capable of generating arguments on two or more sides of a question. Dialectic deals with philosophical and general questions, proceeds by question and answer, employs technical language, and is addressed to philosophers. *Rhetoric deals with particular questions, such as political action, proceeds by uninterrupted discourse, usually employs non-technical language, and is addressed to a popular audience.*” (Miriam Joseph, 2002, p227) (Italics added).

Here we have a characterisation of rhetorical communication that is easily recognizable in advertising, marketing and design. The work of Perelman and others shows that people are convinced not by the deductive syllogism, and rarely by dialectic, but by what is much more subtle, the power of the *enthymeme*:

“In the enthymeme one proposition, most often the major premise, is merely implied, not explicit;

...

The enthymeme is the form of reasoning which is constantly employed in our thinking, conversation and writing, and that which we should notice in our reading and listening. Logic is really practical when it is thus habitually used as a tool in daily life.

The enthymeme is used extensively in exposition and in debate.” (Miriam Joseph, 2002, p142)

And one might add, in advertising and sales pitches. Rhetoric is form of communication, and the main purpose of communication is to affect the behaviour of others, as Postman and Weingarten (1969) have pointed out. Design influences behaviour in a special way: it provides the occasion for behaviour. In consumer design the object must “speak” to the potential purchaser to persuade



him or her to buy. This can happen in various ways, as observed above. Later it may speak to others through “conspicuous consumption” or fashion; or again a particular product may simply come into popular use like say, an umbrella or an electric kettle. It is a truism that people are influenced by the behaviour of others. According to de Botton (2006), “John Ruskin proposed that we seek two things of our buildings: we want them to shelter us, and we want them to speak to us of whatever we find important and need to be reminded of.”

In recent years, particularly in the work of Richard Buchanan, an explicit connection has been made between rhetoric and design.

“... design has no fixed subject matter, which explains why it continues to evolve in a surprising array of new applications and extensions. In essence ... design is an art of inventing and disposition, whose scope is universal, in the sense that it may be applied to the creation of any human-made product. This makes of design an art of forethought, as traditional rhetoricians perhaps regard their discipline as an art of forethought in verbal communication.

At this point we may ask whether design is a modern form of rhetoric – or whether rhetoric is an ancient form of design. ... This inversion may seem strange and unfamiliar, yet it accords with our understanding of how information is shaped in persuasive argumentation and how, in contemporary life, it often emerges in the products of technology. If rhetoric provides systematic forethought in all of the distinct forms of making in words, why should it not be considered an art of design? ” (Buchanan, 2001)

There are many parallels to be drawn between classical rhetoric and design:

“It was not until the last few decades that the philosophically salient features of the Aristotelian rhetoric were rediscovered: in construing a general theory of the persuasive, Aristotle applies numerous concepts and arguments which are also treated in his logical, ethical, and psychological writings. His theory of rhetorical arguments, for example, is only one further application of his general doctrine of the *sullogismos*, which also forms the basis of dialectic, logic and his theory of demonstration. Another example is the concept of emotions: though emotions are one of the most important topics in the Aristotelian ethics, he nowhere offers such an illuminating account of single emotions as in the *Rhetoric*. Finally, it is the

*Rhetoric* too which informs us about the cognitive features of language and style.”  
(Rapp, 2002).

Aristotle identified three modes of persuasion which could be employed in getting an audience to agree with the speaker’s point of view (Rapp). The *ἦθος* (*ethos*) of a speaker referred to his character or standing and hence his credibility. The *λογος* (*logos*) comprised his chosen argument(s). Finally the *παθος* (*pathos*) of the audience was its susceptibility to being swayed by whatever appeals to emotion, such as loyalty, sympathy and so forth might be the most effective in the circumstances. Arguments were carefully chosen from a pre-existing menu with a view to maximising their effectiveness under the three modes. Rhetoric was in effect a technology for convincing listeners through deliberate systematic deployment of all three simultaneously.

These rhetorical terms can be mapped onto design in a straightforward way:

#### **ἦθος** (*ethos*)

Some designers and brands have a great deal of credibility with certain audiences. Some names are even household words. The *ἦθος* (*ethos*) of a designer can be considered to be his or her broad reputation and standing. People assume that if it’s a Calatrava bridge it must be good, or, if they want to build a bridge, then Calatrava would be the best person to design it. People will pay more for a Gucci watch. Every city with pretensions should have one of those curly Gehry buildings. The client wants some of the “*je ne sais quoi*” that the designer exudes.<sup>10</sup> Interestingly, a strong reputation also inhibits criticism: it takes courage and strong arguments to criticise the work of a famous designer, to say that “the Emperor has no clothes.”

Architectural competitions are often designed to eliminate the effect of *ethos* by keeping the designers’ identities secret. Each anonymous entry has to convince a “jury” that it is the best design. The “jury” normally comprises people of high, often international, standing. The winning design then assumes the collective *ethos* of the “jury.” Competitions may have “technical assessors,” completely separate from the “jury,” to make sure that the winning design is technically viable, in case the “jury” should choose a design that was not technically sound, i.e. one with too much *pathos* and not enough *logos*, so to speak.

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<sup>10</sup> Value Analysis considers that there are different sorts of function which a design may need to satisfy: Main, Technical or Internal, Ergonomic, and Esteem functions. Esteem functions communicate our values to others by, for instance, the wearing of designer clothes.

People may want to impress others by assuming a false *ethos*, by wearing a fake Rolex watch, for example. Here is a form of rhetorical communication that is false but still serves its purpose well. In the past rhetoric was criticised because it could be used to mislead an audience.

### **λογος (logos)**

People will usually evaluate a design before buying it. Consumers make comparisons. Manufacturers go to great lengths to create brand loyalty. Where something can not be bought “off the shelf” in the market then the buyer has to get involved in some procurement method. In all these cases people become convinced that they want a particular product or a particular designer’s work. The various forms of communication and persuasion that lead to this result constitute the *λογος (logos)*.

Of course this does not automatically equate to logical thinking or guarantee objectivity. The author once had to point out to an architect with intellectual pretensions, who spoke of students’ “remembering” as a way of designing, that this theory had been discredited hundreds of years ago! The same architect would speak of the difficulty of persuading new clients to be receptive to “high architecture.” A client could be forgiven for thinking that the architect knew what he was talking about, because he could not understand him!

### **παθος (pathos)**

This is the susceptibility of the consumer or client. Fashion “victims” epitomize this dimension of design. The fashion-conscious have a list of “must-have” brands of clothing and accessories. Other manifestations exist, for example people’s desire to have the latest mobile phone or other gadget. People can be convinced by an appeal to their emotions to buy something unsuitable. In certain circumstances, UK law allows for a “cooling off” period that lets people change their mind about certain kinds of purchase for a short time afterwards. In architecture it is not uncommon for clients to have their emotional needs sacrificed to those of the architect (Ó Catháin, 2003).

## **6 SOME UNCONSCIOUS ARCHITECTURAL RHETORIC**

The following excerpts from an article in a “quality” British newspaper furnish some examples of unconscious rhetoric both journalistic and spoken. The piece concerns a small, social housing project in Manchester, containing 23 units.

In this extract one of the architects describes their encounter with the future tenants, as well as the practice's attitude to design in general.

"They were mostly Mancunians who didn't like ... chic modern design. They said, 'We want a house. We want a garden. That's what we've got, and you said you were going to offer us a like-for-like thing.' So they wrote a very interesting brief that called for both world-class architecture and something to please the existing community. ... When they talked about this contradiction," says [one of the architects], "we thought all our research was attuned to that issue. We've always had this idea that there's been a mistake somewhere: that good design and good taste were thought of as the same thing. Taste was a way into some of the quite political issues that have driven us over the years, which is to do with why a certain kind of ... middle-class person has an almost exclusive role in determining what is good design." (Rose, 2006).

The irony of the last sentence was surely unintended. Note how the focus of this narrative changes from a description of the tenants and their needs to architectural polemic, and the casual use of the word "research." Where is the contradiction between world-class architecture and something to please the community? People have world-class consumer products such as cars, TVs, mobile phones and watches which obviously please them or they would not buy them in such quantities.

"World-class" seems to be a term that has come from football. If indeed they really wanted such distinction, it must be doubtful if the residents will have reckoned with the scourge of the constant stream of visiting architects, architecture students, and even ordinary tourists that must be endured by those who live in "world-class architecture."

"According to Rita, a long-time resident ... the reason they chose (those particular architects) was much simpler: "They listened. They really listened to what we wanted. And we just liked them as people."<sup>11</sup> (Rose, 2006).

After a paragraph telling how the residents, "played a key role in determining the internal layouts," we are told about the design of the exterior,

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<sup>11</sup> In practice one of the main survival skills of a designer is the ability to gain the trust of a new client and thus get work. Note that it is not necessary actually to be trustworthy or competent in order to do this; it is enough to appear to be so, as Aristotle pointed out in his *Rhetoric*.

“Admittedly, the residents didn’t specifically request the stage-set façade with its giant brick patterning, mock ornamental gables, cloud-like profiles and false windows, but (the architects) persuaded them of its practical advantages. Primarily, of course, it is a device that enables this double row of terraces to punch above its weight – an important consideration in light of the larger apartment blocks that will eventually surround it. ...” (*ibid.*)

We are not told what the practical advantages of this façade are. Did some hidden agenda include the requirement that it should “punch above its weight?” It is difficult to imagine the residents’ asking for this. They would have needed years of study on an architecture course in order to employ terms like that. It is equally difficult to imagine the architects’ persuading the residents of its value. It is possible to infer from this account that the residents may not have been consulted about the façade at all.<sup>12</sup> Or perhaps they did not express a strong view. It is tempting to suppose that a kind of Faustian bargain was struck between designers and residents: the latter got what they wanted on the inside in exchange for the architects’ having a free hand with the appearance of the outside, presumably in order to be free to create “world-class architecture.”

Design consultants usually start with eliciting user and functional requirements, and this is an interactive process. The observations of Rita above (“we just liked them as people”) are a perfect example of employment the *ἦθος* (*ethos*) of the speaker to maximum effect, to convince the audience of his credibility. So he could be trusted to provide for their wants. The operation of the *λογος* (*logos*) would apply here too, as the two sides ‘came to terms,’ each understanding the other better, or at least *believing* they did, as they negotiated. Since people invest so much emotion in their homes, *παθος* (*pathos*) would be all-important here. It is likely that the future tenants were concerned about what the architects might have in store for them and needed reassurance.

In ancient Greece a particularly fine speech might be kept as an example for others and transcribed into textbooks. Many speeches have come down to us in this way. It could be said therefore that their authors were speaking to more than one audience. It is clear that the architects cited above are aiming at other audiences beyond their immediate respondents. The

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<sup>12</sup> Many architects are reluctant to discuss design with their clients. The author has it on good authority that the late James Stirling would show faded prints to his clients at Cambridge University in order that they would not realise the full extent of the giant sloping glass roof of his History Faculty building.

main audience is actually other architects and anybody who might be in a position to commission a building or influence such a decision, including journalists. And the journalist above, knowingly or not, facilitates this strategy by providing free publicity under the by-line of “Culture,” that dreadful word. It is not explicitly stated when low-cost housing qualifies as “Culture;” perhaps when it is “world-class?” The complex business of designing low-cost housing, something which taxed the finest architectural minds of the twentieth century, is reduced to a discussion of a photographic image that is viewed as a work of art.

## 7 CONCLUDING OBSERVATIONS

Toulmin shows how rhetorical reasoning is precisely the sort of thinking needed for practical matters:

“... for the last four hundred years, the ideas of ‘reasonableness’ and ‘rationality’ – closely related in Antiquity – were separated, as an outcome of the emphasis that seventeenth-century natural philosophers placed on formal deductive techniques. This emphasis did an injury to our commonsense ways of thought, and led to confusion about some highly important questions: above all: the relation of the social sciences to the moral and other value-laden problems that arise in the practical professions.”

The author once suggested that the prognosis for developing a theory of design from science was not good, arguing that design by deduction was a logical impossibility, since a design could not be “deduced” from a statement of requirements (Ó Catháin, 1982).<sup>13</sup> In retrospect it is clear that the attempts of the early design methods movement were doomed to failure because they were preoccupied with deductive logic whereas the typical objects of design do not belong to the things that are necessarily the case, but are among those things which are the goal of practical deliberation and can also be otherwise. As Rapp observed, people have choices. The algorithm, which was the basis of many first-generation systematic design methods, *a fortiori* denied people a choice and therefore was a poor model for design.

Dialectic is the process of determining the truth by question and answer. But there is no truth as such in design. There is only the perceived degree of fit between the design’s performance and

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<sup>13</sup> Gödel’s Proof, which shows that even ordinary arithmetic cannot be axiomatised, was offered to support this argument.

the requirements – sometimes unstated – of the parties involved. Thus dialectic and the rhetorical enthymeme have their counterpart in design when a consumer, after the appropriate enquiries, takes the decision to buy a particular design, or when a design consultant gets the go-ahead, having persuaded the client of the suitability of a particular design proposal.

Buchanan has pointed to an ever-expanding, integrative role for design. This is happening at the same time as Rhetoric is being increasingly seen as providing a comprehensive framework for evaluation. Even those parts of design that depend on hard science depend for their justification on what we may now recognise as a rhetorical evaluation of the user or consumer values and requirements.

This brief appreciation of Rhetoric has illuminated how this kind of reasoning about human values and emotions fundamentally informs design and research into design. This is true even – perhaps especially – where precise, “hard” information is used as part of that process. Therefore we can answer the question posed by the title of this paper and say, “Yes, mostly”.

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